and outwardmoſt being very ſhort, the inwardmoſt Four Inches long, each of them ending in a Point, ſome Scales having on their out-ſides a gummy Juice. In the middle of theſe Scales were the firſt Rudiments of many Seeds, the ſame not being fully ripe, each of which (ſee the *Fig. lit. L*) is ſet about with a great quantity of ¼ inch long, yellow fine ſilken Down, (ſee the *Fig. lit. M*) having a two Inches long *Stylus* or String, (ſee the *Fig. lit. N*) and yellowiſh Membranes encloſing the *Stylus* and *Tomentum*, being feathered at top with Feathers for the ſame purpoſes, and like the former.

I cannot find this mentioned by any Author, unleſs it be that of *Breynius* in his Appendix to his firſt Century, *p.* 22. *Frutex Africanus, fruticis terribilis Narbonenſium folio capitulis oblongis ſquammoſis*, gathered by *Wilhelmus Ten Rhine*, and ſent to him from the *Cape of Good-hope*.

V. *The Extracts of Four Letters from Mr.* John Baniſter *to Dr.* Liſter, *communicated by him to the Publiſher.*

SIR,

TO do right to the Memory of my Friend Mr. *Baniſter*, who indeed was a very Learned and Sagacious Naturaliſt; had lived 14 years at leaſt in *Virginia*, and therefore, having employed much of his Time that way, was moſt likely to have given us a very good Natural Hiſtory of that place. I underſtand after his Death the Government of that place took ſpecial care of his Papers to ſeal them up, and tranſmit them to my Lord Biſhop of *London* here, in

The Royal Society is collaborating with JSTOR to digitize, preserve, and extend access to *Philosophical Transactions (1683-1775)*. www.jstor.org

whoſe Hands they are, and therefore I doubt not but they will be carefully and ſpeedily publiſh'd, unleſs poſſibly, it may not be thought as proper, being poſthumous and incoherent Pieces, to have them printed in your Tranſactions, which is a ſaving Regiſter of many good things, which elſe would be in danger to be loſt; beſides the advantages of Deſign, which here will coſt the Author nothing, and which is the great Trouble in the Publication of things relating to Natural Hiſtory; you are beſt able to conduct and manage ſuch Papers through the Hands of unruly Men, ſuch as the Gravers are, as being excellently well skilled in that Art. However, I think it will be very obliging in you, to offer to my Lord of *London* your Service in that kind, before my Lord ſhall have otherwiſe diſpoſed of them.

In the meantime, to give you a ſlight touch out of my Papers of what he was doing, I will extract a Line or two out of Three or Four Letters which I received from him.

Virginia, May 5. 1668.

I have ſent you what Variety of Land or Freſh-water Snails our Country affords, at leaſt what I have obſerved in it, of thoſe I did receive about 10 *or* 12 *Species, which I have taken care to Figure.*

April 19. 1689.

I have ſent you what Muſcles our Freſhes afford, at leaſt what as yet come within my Obſervation.

I received Six Species, which I have cauſed very carefully to be Figured and Graved.

I have alſo ſent a parcel of Drawings rowled up for my Lord of London; *they are moſt of them of Plants com-*

mon

mon in our Woods, but poſſibly may be Strangers to the Gardens of Europe.

The Phalangium Spurium *is not that of* Zanoni; *nor the* Dipetalos Braſiliana *of* Margrave. *To the Deſcription I made of it in the Year* 1679. *I find this* Quære, An Gentianella Indica Bontii? *We have an other ſmall one of this kind, that runs upon the ground, which I have not yet drawn. The* Mercurialis *differs little from, if it be not the ſame with the* Mercurialis Zeylanica, *&c.* Herman. Cat. Leyd. App. Vide *Mr.* Ray *in* App. p. 1854.

This is the Catalogue of the reſt of the Figures and Names of Plants then ſent.

Periclymenum perfoliatum ſemper virens & florens.

Helleborine Ophiogloſſii Folio.

Securidaca frifolia flore patulo cæruleo, radice Glycyrhizæ ſapore.

Cacalia foliis rotundioribus ad caulem ſeſſilibus.

Crotolaria Americana hirſuta minor, herbacea, caule ad ſummum ſagittato Herman. Append.

Pſeudo-Lathyrus luteus, glaber, & hirſutus, ſiliquis tumentibus nobis in Catalogo.

Here he makes mention of a Catalogue which he ſent in the Year 1679. to the Biſhop of *London.*

Convolvulus monococcos.

Mercurialis Hermophroditica tricoccos, ſeu Julifera ſimul & fructum ferens. Mercurialis Zeilanica tricoccos cum acetabulis. Kupampruja Zeilanenſibus, Herman. Cat. Leyd. fortè.

Fungus Holoſericeus infernè lamellatus, ſuperné ab inſertione, concharum more ſtriatus, & tranſverſim faſciatus.

Fungus

Fungus parvus rubellus ſubtus poroſus.

Fungus pulverulentus, cute duplici, coriacea ſcilicet & membranacea tectus.

Muſcus rupeſtris repens claviculis folioſis, erectis, quadratis.

Pſeudophalangium ramoſum, majus, erectum.

Blitum Spinoſum.

Ariſarum Tryphyllon.

Laurus Tulipifera baccis rubellis, cono erecto capſulato incluſis.

Muſcipula Regia, ſeu Lychnis viſcoſa flore amplo coccineo.

Ricinus lacteſcens fici foliis, ſpinulis mordacibus armatus.

Ulmaria major trifolia flore amplo pentapetalo.

Gnaplialium alterum Americanum.

N. 1, 2. (*N.B.* Theſe Tables I ſuppoſe are with the reſt of his Papers.)

At the bottom of the Table of Inſects are of thoſe ſort of Flies that Mouffet *calls* Muſca Lupus. *I have obſerved that theſe, and ſome others, as the* Tabani, Aſili, *&c. that have but two Wings, have growing out of their Body, under each Wing, a ſmall flexible* Apex *or* Pointel, *with which they poiſe their Body, and keep it in* Æquilibrio, *as the Dancer of the Rope does with his Pole; for pull theſe off, and their Flight is ſhort and unſteddy: Nor can they, tho' they have the uſe of their Wings, guide themſelves ſo, as to keep themſelves from the ground, or to avoid ſtriking againſt, whatever is in their way.*

At the Top of the Table, *Tab. n.* 1. Veſpa Ichneumon fuſca. 2. Veſpa Ichneumon atro-cærulæa. 3. *The* Nympha *common to them both.* 4. *Their Houſes which they make of Dirt.* 5. *The Spiders with which they hatch*

their

their Young. 6. A ſpurious Brood of ſome other Ichneumon *ſometimes found in their Neſts.*

Virginia, Aug. 2. 1690.

Amongſt a parcel of Plants, Shells, Inſects, &c. *by me tranſmitted this year,* (to whom I know not; he means, I ſuppoſe, Draughts and Figures) *be pleaſed to accept of this ſhort Deſcription of a* Land-Snail, *whoſe Figure is that* N. 1. 1. *The out-ſide is of an Aſh colour, inclining to a Yellow, the in-ſide White, with a Bluſh of Red; and in the middle of the Entry on the* Inturn *of the Shell, grows a ſmall white Tooth, or Protuberance. But what is moſt remarkable, the Shell its ſelf is tranſparent; and you may plainly perceive by the Opacity there, that the Body of the Animal lies near the Spiral String or Center, on which the Arch is turned, and that the Empty part of the Shell is ſpread with a thin ſpotted Film. Near the Tooth, but more inward, is to be ſeen a little wateriſh Speck, which by a kind of* Syſtole *and* Diaſtole *contracts and dilates its ſelf; from this proceeds a lympid Trunk, which runs into the Film, and there divides into Branches: Theſe grow leſſer, and ſpread as the Animal recedes or approaches the Mouth; and when it is out, extend themſelves to the very Lip of the Shell. I ſuppoſe the ſame to be in all, at leaſt the Land-kind, tho' not eaſily to be diſcerned. It is likely alſo, that the Film, the* Nautilus *or* Carvil (*as the Sailors call it*) *exerts, may be analogous to this.*

This Deſcription of the Heart of a Snail agrees well with the Anatomy thereof, made, and long ſince publiſhed by *Harder*; alſo with that other Anatomy of the ſame Animals, by *Franciſcus Redi.*

Virginia,

Virginia, May 12. 1692.

I have ſent you another parcel of Freſh-water *and* Land Snails, *in which I believe ſome are new.* [And ſo there was divers Species, all which I have carefully cauſed to be graved.] *There is a ſmall one of the Land-kind, with a dented* Aperture, *that I formerly ſent; Time had worn that Shell ſmooth and white; but I lately found it with an outward Coat, on which it is hirſute, or rather finely echinated. I am apt to believe that theſe, nor hardly any elſe are dented, till they are at their full growth; for you will find ſeveral ſmall ones amongſt theſe with an open entrance, that ſeem to belong to this kind.*

I hitherto obſerved very little Variety of Naked Snails; *I know of but one kind, which is a ſmall Aſh-coloured and ſpotted one, and milkey like yours,* Tit. XVI. *but ſome of theſe I would have ſent, but,* &c.

I ſend you the Originals, that you may ſee I have done fairly by my Friend in the Extracts; which I deſire you to keep among the Society's Papers.

April, 18. 93. *Yours,* &c.

VI. *An Account of digging and preparing the* Lapis Calaminaris, *in a Letter from Mr.* Giles Pooley *to Sir* Robert Southwel *Preſident of the R. S.*

SIR,

I Promis'd a long while ago to give you an Account of the *Lapis Calaminaris* which is digged and prepared here near me; that I have not, as I intended long before

of this Fort compaſs in almoſt as much ground as the Tower of *London* here there has been, and ſtill is, more *Roman* Coins found than in any place in *England*.

3. *Dubris* or *Dover*, where he believes the Church to have riſen out of the old *Roman* Fortreſs, and the ſquare Tower in the middle fitted with Holes for Speculation, to have been the very *Roman Specula* or Watch-Tower, and the *Devil's Drop* the Remains of the *Roman Pharos*.

4. *Folkſtone*, a place famous for *Roman* Antiquities, which he ſuſpects the ſame with the *Lapis Tituli* of *Ninius*, taking the Word *Stonar*, where *Lambert* places *Lapis Tituli* to be a Corruption of (and formerly written) *Eſtanore* and *Eſtanores*, ſignifying the Eaſtern Border or Coaſt.

5. *Lim* or *Limhill*, where *Stutfall-Caſtle*, with a large Circuit of 10 Acres, was of old encloſed with a *Roman* Wall, ruined not ſo much by Time, as a Seiſure of its Materials for the building of *Lim-Church* and the Archdeacons caſtellated Manſion. The Name *Stutfall* he derives from *Stod fold*, there being formerly kept and ſtabled a Stud of Mares. This place is alſo called *Shipwey*.

6. The laſt *Kentiſh* Fort is *Anderida* or *Anderidos*, as to the Situation whereof he is leſs certain, whether at *Pemſey*, *Haſtings*, or *Newenden*, tho' he inclines to one of the former. The *Weald* was formerly called *Sylva Andred*, a Deſert place unpeopled, fill'd only with Herds of Deer and Droves of Hogs. He ends this Treatiſe with an Enumeration of the Quit-rents formerly paid out of the Weald, as *Gavel-ſwine*, *Scot-ale*, *Pannage*, *Gate-penny*, *Sumer hus ſilver*, *Corredy*, and *Danger*.

The whole is concluded with a Catalogue of the Lord Wardens of the Cinque-Ports.

An Additional Note to Page 670. *of this Tranſaction.*

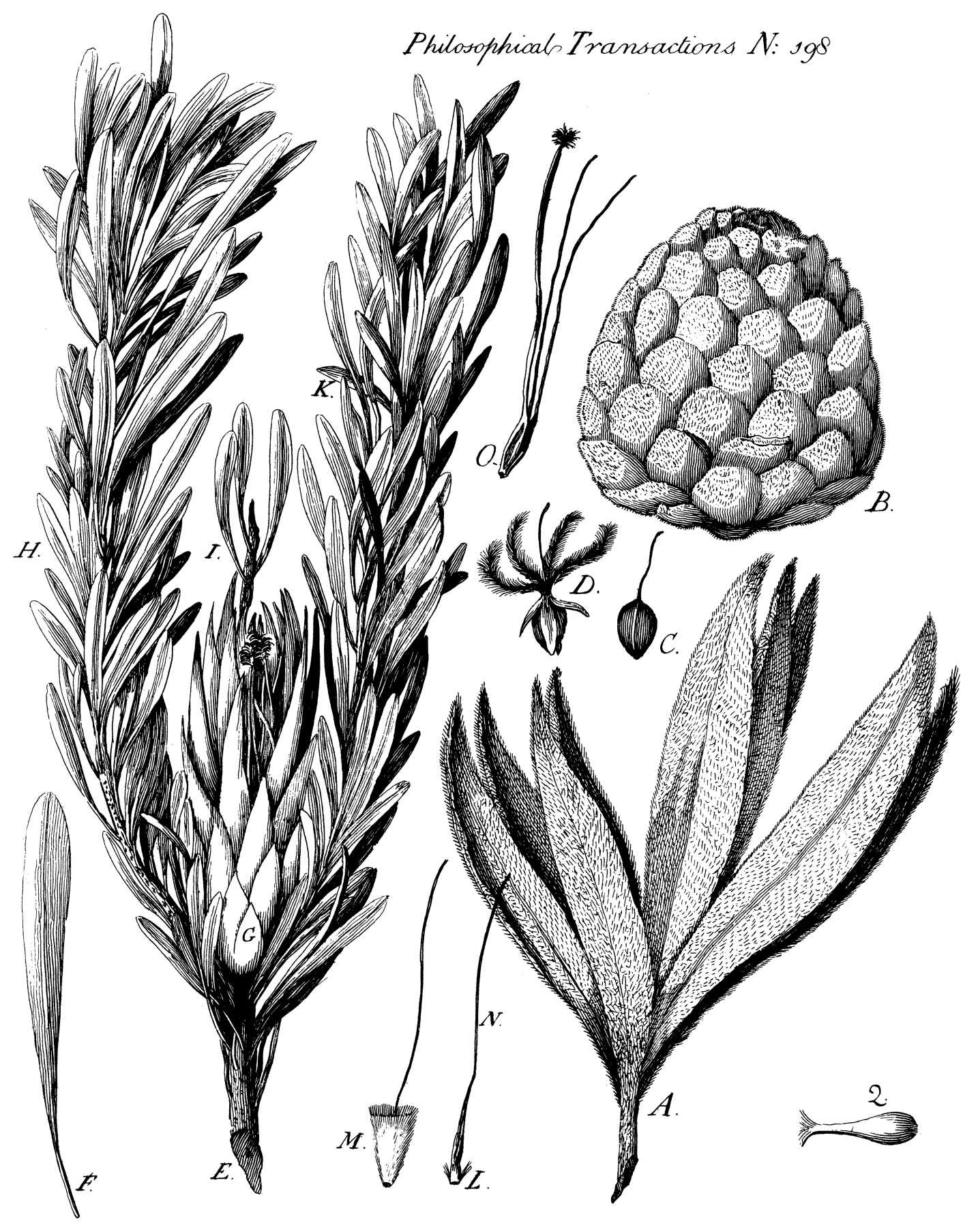
MEntion being made in this Letter of Mr. *Baniſters*, of the little Pointel found under the Wings of ſeveral

veral Flies, I thought fit to tranſcribe what Dr. *Hook* ſays concerning the ſame in his *Micrographia*, and to give the Figure thereof, as it is by him deſcribed. See *Lit. Q.* in regard the Book is very ſcarce, *Micrographia, Obſerv.* 38. *pag.* 173. 'Whilſt I was examining and conſidering the 'curious Mechaniſm of the Wings, I obſerved that un-'der the Wings of moſt kinds of Flies, Bees, &c. there 'were placed certain Pendulums, or extended drops (as 'I may call them from their reſembling Motion and Fi-'gure) for they much reſembled a long hanging drop of 'ſome tranſparent viſcous Liquor; and I obſerved them 'conſtantly to move juſt before the Wings of the Fly be-'gan to move; ſo that at the firſt ſight I could not but 'gueſs, that there was ſome excellent uſe as to the Re-'gulation of the Motion of the Wings, and did fancy that 'it might be ſomething like the Handle of a Cock, which 'by vibrating to and fro, might as 'twere open and ſhut 'the Cock, and thereby give a paſſage to the determinate 'Influences into the Muſcles: Afterwards, upon ſome o-'ther Trials, I ſuppoſed that they might be for ſome uſe 'in Reſpiration, which for many Reaſons I ſuppoſe thoſe 'Animals to uſe; and methought it was not very impro-'bable, but that they might have convenient paſſages un-'der the Wings for the emitting (at leaſt) of the Air, if not 'admitting, as in the Gills of Fiſhes is moſt evident. Or per-'haps this Pendulum might be ſomewhat like the Staff to 'a Pump, whereby theſe Creatures might exerciſe their 'Analogous Lungs, and not only draw in, but force out the 'Air they live by: But theſe were but Coujectures, and 'upon further examination ſeem'd leſs probable.

An ADVERTISEMENT.

THE Ingenious are deſired, That if they have any looſe Papers relating to the ſame Deſign with thoſe of Sir *William Petty*'s, Printed in this Tranſaction, they will pleaſe to communicate them, which Favour ſhall be acknowledged by the like Communications by the Publiſher.

LONDON, Printed for, and Sold by *S. Smith* and *B. Walford*, Printers to the *Royal Society*, at the *Princes Arms* in St. *Paul's* Church-yard. 1693.


K.
O.
B.
H.
I.
D.
C.
G
N.
A.
2
M.
L.
E.
F.